

STRATEGIES FOR IMPROVING TEACHING AND LEARNING OF LEARNERS WITH VISUAL IMPAIRMENT IN INCLUSIVE CLASSROOM: IMPLICATION FOR E-COUNSELLING

MOKWENA MORELLE¹, RANTSIE KGOHULE² & MOSES ONYEMAECHI EDE³

^{1,2}School of Education Studies, Faculty of Education, University of the Free State, South Africa

³A Postdoc Fellow, School of Education Studies, Faculty of Education, University of the Free State, South Africa

ABSTRACT

Engaging Children Especially Those With Visual Impairment In Teaching And Learning At The Time Of COVID-19 Appears So Worrisome To Most Researchers, Teachers, And Experts In The Field Of Special Education. Given This Challenge, The Usefulness Of Information Communication Technologies (Icts) Seems To Become The Only Alternative In Compacting The Situation. This Study Explored The Strategies To Improve The Teaching Of Learners With Visual Impairment (LVI) In Inclusive Classrooms In Four Regions In The North-West Province And Its Implication For Children Library And E-Counselling. A Qualitative Research Approach Was Followed, Underpinned By An Interpretive Method As A Paradigm. Participants Were Purposefully Selected. Data Were Collected Through Semi-Structured Interviews And Observations. A Total Of Sixteen Participants Were Involved In This Study. The Data Were Audio-Recorded For Accurate Transcription And Analysis. The Above Responses Illustrate That The Principals And Sess Had A Clear Idea Of What Teaching Strategies Are And Teachers (The Real Implementers Of Teaching Methods/Strategies) Do Not Have A Clear Understanding Of These. The Possible Explanation May Be The Fact That Principals And SES Workshops Address The Issue Frequently. This Is Worrying Because The Same Information Should Be Shared With Teachers As Well. Almost All Sess Showed A Clear Understanding Of What A Teaching Strategy Is But It Is Still A Challenge Because Teachers As Planners And Implementers Of Differentiated Teaching Strategies Are The Pillars Of The Knowledge Of Teaching Strategies. They Also Went To The Extent Of Showing Their Understanding Of The Use Of Different Assessment Methods. Therefore, Teachers As The Bonafide Implementers Of Teaching Strategies Must Be Equipped With The Necessary Knowledge And Skills. To This End, This Study Recommended That Relevant Agencies Like The Ministry Of Basic Education Should Establish Online Services That Provide The Opportunity For The Children To Learn From Their Homes. Also, Teachers Who Are Occupationally Maladjusted In Using ICT Should Be Provided E-Guidance And E-Counselling.

KEYWORDS: *Teaching Strategies, Visual Impairment, Inclusive Classroom, And Children Library & E-Counselling*

Received: Aug 08, 2021; **Accepted:** Aug 28, 2021; **Published:** Oct 19, 2021; **Paper Id.:** IJMPERDDEC20212

INTRODUCTION

The importance of Information and Communication Technologies (ICTs) in assisting and facilitating the processes of teaching and learning cannot be glossed over. Also, there are so many assistive technologies that are used for individuals with disabilities. These technologies help inclusive school educators to facilitate and achieve the goals of inclusiveness. Educators' teaching strategies have an influence on the education of all learners in general. Research done by Woolfolk (2010) indicates that poor teaching strategies are some of the factors leading to learners' poor performance, including those of learners with visual impairment (LVI). Bruwer, Hartel and Steyn

(2014) concur that educators' inability to make use of proper teaching strategies have resulted in learners' poor academic performance in their formal assessment. Despite this awareness, very few attempts, if any, have been made to ensure that educators' teaching strategies are improved. This study, therefore, intends to propose suitable strategies for teaching learners with visual impairment in the inclusive classroom.

Some of the teaching strategies are reading strategies, narration teaching strategy, Lecture strategy A reading strategy is defined as a "cognitive or behavioural action that is enacted under a particular contextual condition, with the goal of improving some aspects of comprehension" (Lekota, 2014:95). This simply means that a reading strategy is a device that one may use when faced with a text with the aim of understanding it. Therefore, it is pivotal that LVI be taken cognisance of when choosing the type of materials because reading with understanding is the key to performing successfully, academically and beyond. The wrong choice of reading material may disadvantage LVI due to its font being not in their favour, thus disadvantaging them.

The narration teaching strategy in its most basic form is a means by which a culture passes on to the next generation what they have found to be useful, to be of value, or to be good (Miller & Pennycuff, 2010). In teaching the narration strategy, the curriculum can be understood as a certain way of telling a story about the world. Narration as a strategy becomes more interesting in LVI when the narrator tells the story coupled with different gestures, changes in moods, volume and sound. Therefore, the teacher as the narrator must be well acquainted with different strategies to bring about different moods and feelings. In its broadest sense, it is an account provided by the narrator of character and events, moving in some pattern over time and through space.

The lecture strategy is teacher-centred with learners very inactive and doing all the listening. The inactivity of the learners limits its usefulness as a teaching strategy because learners merely listen to the teacher. It is therefore important to consider the attention span of the learners (Gifkins, 2015).

Demonstration means any planned performance of occupation skill, scientific principle or experiment (Basheer, Hugerat, Kortam & Hostein, 2017). The most effective way to teach an occupational skill is to demonstrate it. For the demonstration teaching strategy to be successful in the implementation of strategies to improve teaching of LVI, the teacher needs to rehearse preparations before the time, think about possible interruption, get possible teaching materials, visual and teaching aids ready and arrange them accordingly, consider that each time for demonstration should not exceed 15 minutes, remove all extraneous materials, plan to use a skill or method to advantage; work from simple to complex, one step at a time (Weaver, 2014).

Different countries have come up with different strategies to resolve the challenge of teaching learners with visual impairment in inclusive classrooms. This means that teachers use strategies to enhance learning; however, the type of teaching approach selected by the teacher needs to vary according to the type of learners, learning tasks, assessment procedures, and context, as well as the knowledge and skills of the teacher. For instance, in Britain inclusive classroom teachers are increasingly faced with the challenge of teaching learners who are visually impaired. Therefore, teachers with a view to improve inclusive teaching strategies are ongoing tasks within the school context and are not limited to random workshops (Dorfling, 2016). In Zimbabwe, teachers undergo constant training with the aim of developing their skills (Hunt, 2013:102). According to Kuyini and Mangope (2011), many teachers teaching LVI in Ghana have displayed frustration, anger and a negative attitude towards the implementation of improved teaching strategies. Therefore, they are taken for continuous in-service training so as to improve teaching strategies in LVI, in inclusive

classrooms (Lake, 2010). Teachers are taken for in-service training, in order to equip them with the implementation of differentiated strategies for LVI in the inclusive classroom. The fundamental importance of the teaching strategies is to make it easier to implement a variety of teaching methods and techniques.

Thwala (2015) maintains that teachers are the key figures in the implementation of successful teaching strategies for LVI in the inclusive classroom in South Africa. It is therefore pivotal that teachers as cornerstones of instruction for disseminating knowledge to learners, apply differentiated instruction and suitable strategies to teach LVI (Zwane, 2016:20). However, Wanjiru (2014) found that capacity building, Inadequate policies; Attitude of teachers in implementing strategies; Inflexible and unadaptable curriculum; and the Lack of TLSM are challenges to be identical in all the selected African countries. Numerous teachers display frustration, and a lack of knowledge and skills to work with LVI in implementing teaching strategies in inclusive classrooms. The result is that teachers do not implement relevant teaching strategies (Suc et al., 2016). Teachers in South Africa are not adequately trained for inclusive education (De Jager, 2013). Teachers lack knowledge and skills regarding the needs of such learners. Teachers who were trained at teachers training colleges and universities in South Africa prior to 1994, were not trained to deal with learners with visual impairment, as inclusive education was not offered as one of the modules studied in such colleges/universities. Teachers' knowledge of learners' level of visual disability is important when applying the relevant teaching strategies. Most teachers who are currently in the teaching fraternity are older teachers who were trained before the implementation of inclusive education; therefore, they do not completely comprehend the issue of teaching learners with learning barriers being taught alongside non-disabled learners in the regular classroom. It is indicated by Butakor et al. (2018) that older teachers tend to have stronger negative attitudes towards inclusion because they have had limited or no training in teaching learners with visual impairment. It is uncertain to the researchers what constitutes and nature of the challenges facing South African inclusive teachers on the teaching strategies. Hence, this present study becomes imperative and timely.

The theoretical framework underpinning this study encompasses the bio-ecosystemic approach. It is for this reason that individual human beings and groups of people interact and are dependent on one another in their environments. This approach also acknowledges Vygotsky's idea that no person lives in a vacuum (Kufakunesu, 2015; Donald, Lolwana & Lazarus, 2012). Therefore, this paradigm is appropriate for the study, as the researchers intended to understand participants' experiences and perceptions in exploring improved strategies for the teaching of learners with visual impairment (LVI) in inclusive classrooms.

METHOD

Ethical Consideration

In this study, an ethical clearance application was lodged with the College of Education, University of the Free State (UFS) and permission to conduct this study was given. Participants gave approval to participate in the study. This assisted in building trust and in turn, encouraged the participants to willingly participate in the interviews. Furthermore, it encouraged participants to gain self-esteem and view their role as important in this study. The researchers first sought the verbal consent of the research participants and they were told about the aim of the research, so that they would not be coerced or forced to participate in the research. In order to win participants' confidence, the researchers ensured strict confidence and anonymity during data gathering so that the participants' security was not compromised.

Design

The study was based on an interpretive paradigm, which is “the way of studying human experience through an empathetic identification with the individual” (O’Neil & Koekemoer, 2016:04). This study employed a qualitative research methodology. The selection is based on the research problem and the characteristics of qualitative research that are applicable in this study.

Data Collection Techniques

Data in this study were collected through semi-structured interviews and the observation method. The selected data collection techniques are significant because participants use the interviews for telling their stories in microcosm, of their consciousness (Austin & Sutton, 2015). By making use of the semi-structured interview, participants provided me with rich qualitative data of their life experiences.

The observation method was used to enhance the information collected during interviews. Observation is a purposeful, systemic and selective way of watching and listening to an interaction or phenomenon as it takes place (Keiding, 2010). Observation implies seeing, as well as observing with the other senses (Keiding, 2010). The researchers also made an intensive analysis of the vision of the ten selected schools in the North-West Province. The vision statements as policies need to encapsulate the facilitation and use of differentiated teaching strategies in the inclusive classroom.

The last method of data collection was document analyses. Documents can be written, oral, visual (such as photographs) or cultural artifacts. The strength of documents as data sources lies in the fact that they already exist in an institution (Meriam, 2016). The documents in this study were the vision and mission statements of the ten selected primary schools in the North-West Province. The mission and vision statements as policies need to encapsulate the facilitation and use of differentiated teaching strategies in inclusive classrooms. Policies were then analysed and made available to the researcher at the time of classroom observation.

Participants

Purposive sampling was employed in this study to select participants. The participants were selected through a certain defining quality that makes them holders of the data needed for the research (Human, 2010). The participants were from four selected primary schools in all four regions of the North-West Province; that is, two schools from each region. The regions include: Dr. Kenneth Kaunda; Bojanala; Dr Ruth Segomotsi Mompoti; and Ngaka Modiri Molema. Four principals as managers and who were responsible for the implementation of teaching strategies in inclusive classrooms; and four subject advisers (that is, one from each region) who are responsible for developing teachers in improving teaching strategies to enhance the successful inclusion of LVI, will be used. In addition, eight teachers (two from each school) who are presently implementing teaching strategies and who work directly with the visually impaired and one chief education specialist was also selected. The latter’s expertise in heading up subject advisers from each region is crucial.

Teachers who are teaching learners with visual impairment, were interviewed and they are referred to as teacher number one from school one, which will be written as T1s1. Teacher number two from school one will be T2s1 and teacher three from school two will be referred to as T3s2; similarly, teacher four from school 2 will be T4s2. The teacher from school three will be regarded as T5s3, then the teacher number six from school 3 will be written as T6s3.

Lastly, the two teachers from the last school will be T7s4 and T8s4. Participants were both male and female teachers; all qualified inclusive classroom teachers. There was only one School Governing Body (SGB) hired teacher and the rest, including the principals, are employed by the Ministry of Education and Sports

Development on a permanent basis in their schools. Some teachers are diploma holders whilst others are degree holders and their teaching experience varies from five to twenty-five years. Participants have been represented by numbers and alphabets. As alluded already that pseudonyms were used, teachers' names are withheld to protect their identity and maintain confidentiality.

There were also four principals to be interviewed; the principal from school one will be referred to as P1S1 and the principal from school two will be referred to as P2S2. The principal from school three will be P3S3 and lastly P4S4 that is, principal 4 from school 4. The senior education specialists who work with teachers in providing development and support were also interviewed and will, in this regard, be identified as SES1, SES2, SES3 and SES4 as they were from each of the four different regions in the North-West Province.

Data Analysis, Interpretation, and Reporting

Data in this study were analysed by means of content analysis, which according to Woods (2017), provided the basis for identifying the main themes that emerge from the responses given. The aim of data analysis was to convert information into an answer to the research question. Qualitative data analysis was primarily an inductive process of organising the data into categories and identifying the patterns among the categories, most of which emerge from the data (Maponya, 2014). This was an ongoing exercise and takes place throughout the research process. In the words of Merriam (2015:197,162): "Without ongoing analysis, the data can be unfocused, repetitious and overwhelming". All the information obtained and recorded from the transcribed interviews will be qualitatively analysed.

The second stage was identifying the observation data analysis technique. Observation is the technique of analysing data through direct contact with the object, usually another human being (Anastasia, 2017). During classroom observation, specific attention was on the following characteristics, as indicated by Borich (2016):

- There is a particular place in the organization;
- There is a specific group of people; and
- Some activity by the people is evident.

The particular place in which the study was conducted was in the classroom of LVI. The specific group of people were: LVI and teachers teaching these learners in inclusive classrooms. In order to achieve this, those teachers whose classes formed part of the observation, were be consulted to obtain consent. Those who gave consent were provided with a timetable to allow me to plan suitable dates for visits. The teachers were informed only upon my arrival, which was timed for the proper arrangement of the actual observation. Notes were taken and recorded during the observation, including the physical surroundings, learners' actions, and their physical characteristics. The last observation was the activities by the learners in their classrooms. The activities by the people were the actual lesson presentation by the teacher, with a specific focus on the teaching strategies the teacher would be applying during the lesson presentation.

The table below represents the themes found in the study. The following themes aimed to answer the main research question of improving teaching strategies for learners with visual impairment in inclusive classrooms.

Table 1: Main Themes and Categories Relating to Educators' and Learners' Experiences in the Classroom

	Main Themes	Categories
Theme 1	Understanding teaching strategies	Adapting teaching strategies Curriculum adaptation Application of teaching strategies
Theme 2	Training of teachers in using differentiated teaching strategies. Teachers are not adequately trained for dealing with LVI.	In-service training Teacher development
Theme 3	Teaching strategies in inclusive classrooms.	Teachers' knowledge in the use and the impact of the utilisation of assistive devices

RESULTS

Teachers responded differently in their understanding of the concept teaching strategy.

T1S1: Truly speaking, as a newly appointed teacher in teaching fraternity, I don't know much. I only heard about it and read about it from the dictionary. I don't know much about it. (This was the teacher hired by SGB)

The second teacher in their response indicated that they were not sure of what teaching strategy is.

T2S1: I don't know much about teaching strategy; maybe teaching methods I am not so sure.

The other teacher responded by saying how teachers prepare for their classroom, plans and files on how they are going to teach learners. This is what they said in their response:

T7S4: I understand teaching strategy as how the teacher prepares for his classroom; on how he is going to teach the class. How the teacher prepares his files and plan on how he is going to teach learners.

Even though a few teachers showed a clear understanding of what teaching strategies are, many teachers were still not sure or aware of what different teaching strategies entail. One teacher responded that a teaching strategy is when learners are given different tasks according to the level of complexity. This reveals that teachers lack knowledge about what is meant by the concept 'teaching strategies' and this is how the teacher responded:

T4S2: Is the way you are teaching because we have different learners; you can have the clever ones, average and slow learner and the first one you can give them more challenging work. The slow learner may be given a simplest work and more examples so that they can understand you. For example, in fractions, the teacher needs to teach from known to unknown by being more practical, by showing them cutting of apple into two halves and don't give them answers to test their knowledge.

In responding to the same question, it was only one principal who also showed a minimal understanding of the concept, teaching strategy and this is how he responded:

P1S1: Teaching strategy is the process whereby learning is based on problems with something and the teachers need to implement some information to the learners.

In contrast with this, many principals showed a clear understanding of the concept teaching strategy and this is how they responded to the question:

P2S2: Teaching strategy is about the skills and the methods that we use in teaching learners in our schools.

P3S3: Teaching strategy is the way in which teacher put in place in order to reach out to learners in simplifying the teaching strategy so that all learners must be taken on board, taking into consideration alternative teaching methods to enhance learners' participation.

In responding to the same questions, the Senior Education Specialist (SES) showed much more understanding of the concept teaching strategies and this is how they responded:

SES1: Teaching strategy refers to the approach, the methodology that one follows that one particular person plan to present his lesson.

SES2: Teaching strategies are the styles, approaches and skills that the teacher implements or put into practice when presenting a lesson. It needs the teacher with special expertise to be able to put into practice such strategies.

SES3: Teaching strategies are the different ways of inculcating knowledge from the educator to educant. They may be style, methods and in assessment, there may also be different assessment methods of questioning.

SES4: These are the methods, skills, styles, different assessment methods to make sure that all learners are accommodated in the classroom, irrespective of their level of comprehension.

The above responses illustrate that the principals and SESs had a clear idea of what teaching strategies are and teachers (the real implementers of teaching methods/strategies) do not have a clear understanding of these. The possible explanation may be the fact that principals and SES workshops address the issue frequently. This is worrying because the same information should be shared with teachers as well.

Almost all SESs showed a clear understanding of what a teaching strategy is but it is still a challenge because teachers as planners and implementers of differentiated teaching strategies are the pillars of the knowledge of teaching strategies. They also went to the extent of showing their understanding of the use of different assessment methods. Therefore, teachers as the bonafide implementers of teaching strategies must be equipped with the necessary knowledge and skills.

DISCUSSIONS

The finding showed that they did not know much about the concept 'teaching strategy' and they had only read about it and looked for the definition in the dictionary. Other teachers also indicated that they did not know much about the concept, with one teacher stating that it might be teaching methods (Pelch, & McConnell, 2016; Tharayil, Borrego & Prince, 2018).

On the other hand, many teachers showed a clear understanding of the concept teaching strategy. Some explained the concept as the way teachers teach learners, making use of different teaching skills, methods or strategies in teaching LVI in inclusive classrooms. They further explained that in teaching slow learners, the teacher needs to make use of a teaching strategy that will cater for their needs. For example, the slow learner may be given the simplest work and more examples, so that they can understand the teacher. For instance, in fractions, the teacher needs to teach from the known to the unknown by being more practical; showing them the cutting of apple into two halves and not giving learners the

answers, so as to test their knowledge. In the study, it was found that generally, teachers showed that they understood the concept, teaching strategy (Darling- Hammond, Flook, Cook-Harvey, Barron & Osher, 2020).

Almost all the principals showed that they clearly understood the concept, teaching strategy by explaining it as the different teaching skills, methods, and strategies that the teacher implements. They also explained the concept as the way in which teachers reach out to learners by simplifying the teaching strategy, so that all learners are involved in alternative teaching methods to enhance the learners' participation.

It was found that teachers were not well acquainted with the differentiated teaching strategies for teaching LVI. Teachers were still using one method with all the learners, irrespective of their learning barriers. This was a result of a lack of training and workshops. Although there were some workshops held, they were not specifically for training teachers in the differentiated teaching strategies and how such strategies are implemented. This problem was worsened by the fact that many of the teachers divulged that they had not been trained and some indicated that they were not qualified to teach in inclusive schools.

It was also found that the teachers were unaware of the policy on SIAS, which could assist them in identifying the LVI and the level of their challenge. This would assist the teacher in the choice of a relevant teaching strategy for such learners in catering for their needs. For the teacher to meet the needs of LVI, it is imperative that they should be familiar with different teaching strategies. Senior education specialists should be invited where teachers feel that it is more work and a further burden to prepare for each learner in the classroom. The specialist could advise them on how to alleviate the workload.

As a result of teachers being unfamiliar with differentiated teaching strategies, the researcher proposed several strategies that might be effective for the inclusion of learners with vision challenges. Many teachers gave the impression that they were using 'one size fits all' strategy for all learners in inclusive classrooms. Despite the fact that the teacher lacked knowledge in the implementation of differentiated teaching strategies, it was not readily accepted that the researcher proposed teaching strategies that would enhance and result in catering for the needs of learners with vision challenges, (Tharayil, Borrego & Prince, 2018). The main research findings revealed that teachers teaching LVI do not have a clear understanding of the concept, teaching strategies. It was also discovered that teachers are not trained, skilled and knowledgeable about the implementation of teaching strategies. In addition, since they lack knowledge and skills, teachers have developed negative attitudes, which have resulted in frustration while working with LVI. This nonchalant attitude also resulted in teachers neglecting to prepare their work, which caused failure to implement teaching strategies. It was found that the availability of resources and support for the utilisation of DITS was very limited. Teachers and principals pointed out that the curriculum in place was not adjusted to cater for the needs of LVI in inclusive classrooms. Furthermore, results showed that teachers were not trained in the use of assistive devices and that there were no technological resources available for visually impaired learners and their teachers.

Implication for Children Library Services and e-Counselling

As the participants illustrated that the principals and SESs had a clear idea of what teaching strategies are and teachers (the real implementers of teaching methods/strategies) do not have a clear understanding of these. By implication, organizing online workshops for teachers who are the real implementers of inclusive education policy. By doing this, teachers will be well equipped with regards to strategies for the implementation of inclusive education.

It also implies that government should provide adequate online library services for inclusive schools so that the children will be missed out on teaching and learning because of stay at home orders by the government.

It implies that Internet access is crucial in inclusive education teaching and learning. So teachers need to embrace the role of ICTs for everything about school and work. Therefore, teachers as the bonafide implementers of teaching strategies must be equipped with the necessary knowledge and skills ICT.

School counsellors working in inclusive schools should assist in providing online counselling services to include teachers.

RECOMMENDATIONS

Given the findings of this study, it is recommended that the educators should seek to enhance high powered effective teaching and learning. This would help to ensure the realization and execution of differentiated teaching strategies. Educators should have knowledge of the needs of LVI and initiate remedial procedures and intervention strategies. The duration of the training has also been a challenge; therefore, the researcher recommends that the training should encapsulate the following:

- The training should be specifically on the training of teachers working with LVI;
- The training should focus on the selection of proper and relevant teaching strategies;
- The utilisation of assistive devices in the implementation of differentiated teaching strategies in the inclusive classroom; and
- Motivating and supporting teachers on how to work with LVI.

In the interview with teachers, it was revealed that they were not qualified to teach LVI and generally, in the inclusive school, they were not in possession of relevant qualifications. It is recommended that the department assist teachers to acquire such qualifications to enable them to implement differentiated teaching strategies for teaching LVI in the inclusive classroom. Teachers may enrol at any of the universities to study for a certificate or diploma in Inclusive Education, which will also assist them with the knowledge and skills to utilise differentiated teaching strategies.

Teachers also indicated in their interviews that their training as teachers did not involve information on teaching LVI. One teacher mentioned that guidance was needed on how to use flexibility which was inclusive orientated, to make the necessary adaptations to support learners with visual impairment. It is recommended that the Department of Basic Education organise a series of workshops to train teachers on inclusion and this will boost their morale and encourage them to enhance the positive inclusion of LVI. The training programmes for teachers teaching LVI in inclusive schools should be developed. The nature of the programmes should specifically focus on the training of teachers in the implementation of differentiated teaching strategies in teaching LVI in inclusive classrooms.

In responding to questions about curriculum adaptation, teachers alluded clearly to the fact that the curriculum was not adapted to meet the needs LVI in the implementation of differentiated teaching strategies. Curriculum adaptation and modification foster the inclusion process. The current curriculum that the schools use was designed without the consideration of learner impairment. Therefore, it is recommended that the North-West Ministry of Education should revise the current curriculum and make it inclusive and flexible for adaptation. This will then assist teachers to make an informed choice of differentiated teaching strategies that suit the needs of LVI.

Again, teachers teaching LVI in inclusive schools should be given pre-service, in-service and continuous professional development training, along with supervisory assistance and workshops on teaching LVI and the implementation of differentiated teaching strategies. Inclusive school teachers should receive professional training on how to choose relevant teaching strategies for LVI, to include all types of learners in their classrooms. Thus, the habit of implementing an appropriate inclusive classroom teaching strategy will be developed.

Limitations

The findings of this study cannot be generalised to all areas of education because they represent the perceptions of a small sample of teachers teaching LVI in inclusive classrooms and the results are specifically for LVI. Furthermore, the findings of this study focused on only eight schools; that is, two in each region thus limiting the findings. This is as a result of having only a few inclusive schools in the province, especially for learners with severe visual impairments. The number of participants was limited and quite a few showed little interest, as they are not inclusivity orientated. Some turned down the researchers at the eleventh hour.

The other limitation is that some of the participants were known to the researchers and this may have brought about bias to the responses in order to create a good impression. The study is delimited to one barrier, that of being visually impaired. Firstly, teaching such learners on its own is a challenge; secondly, the application of different teaching strategies is also a challenge.

A further limitation was that teachers could not be observed over longer periods of time in class to establish whether they did indeed promote positive inclusion. Ideally, each teacher teaching LVI should be observed for a length of time to establish which teaching methods, integration and assessment strategies have been implemented.

Strengths

This study can be used as a source of information to design strategies for improving the teaching of LVI in inclusive schools. It has hopefully created a better understanding of how challenging it is for the school to make a shift from mainstream to inclusion, without the participation and help from the entire community. The study has also highlighted that it is important for teachers to be trained, supported and empowered to make them confident to accommodate LVI.

This study provided the participants with the opportunity to express their fears and frustrations, as well as their hopes pertaining to the choice of appropriate teaching strategies in inclusive schools. Through this study, the researcher was able to identify areas where improvement still needs to be effected.

The study also presented a broader picture as to what challenges are being experienced by learners with learning barriers in inclusive schools. It also disclosed the revolutionary measures needed to be taken to alleviate the problems experienced by teachers, principals and senior education specialists in the implementation of inclusive education for learners with learning barriers.

Furthermore, the study also provided awareness to the Department of Basic Education about the frustrations and the way teachers teaching LVI lack knowledge, which is aggravated by not being in possession of the relevant teaching qualifications to teach such learners. It is, through this study, that the Department of Basic Education will hopefully be made aware of the challenges emanating from the lack of assistive devices, which cause frustrations in teachers in attempting to implement differentiated teaching strategies.

Contact Author

Dr. Moses Onyemaechi Ede

A Postdoc Fellow, School of Education Studies, Faculty of Education, University of the Free State, South Africa.

REFERENCES

1. Anastacia, A. (2017). *Overview of Qualitative and Quantitative Data collection methods*. Bengaluru, Karlsruhe.
2. Austin, Z.A. & Sutton, J. (2015). *Qualitative Research: Data Collection, Analysis and management*. *Can, J. Hosp Pharm*. 68 (3), 226-231.
3. Basheer, A., Hugerat, M., Kortam, N and Hosrtein, A., (2017). *The Effectiveness of Teachers use of demonstration for enhancing Students Understanding of Attitude to Learning the Oxidation-Reduction Concept*. *Eurassia Journal of Mathematics, Science and Technology Education*, 13(3), 555-570.
4. Bruwer, M., Hartel, C. and Steyn, M. (2014). *Inclusive education and insufficient school readiness in Grade 1, Policy versus Practice*. *South African Journal of Childhood Education* (2) 18-35.
5. Butakor, P. K., Ampadu, E. and Suleiman, M. (2018). *Analysis of Ghanaian teacher's attitude towards inclusive education*. *International Journal of Inclusive Education*, 1- 16.
6. Darling-Hammond., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D., (2020). *Implication for educational practice of the science of learning and development*. 10.1080/10888691.2018.1537791 Downloaded on 22 August 2020.
7. De Jager, T. (2013). *Guidelines to assist the implementation of differentiated learning activities in South African secondary schools*. *International Journal of Inclusive Education*, 17(1), 80-94, DOI: 10.1080/13603116.2011.580456
8. Donald, D., Lazarus, S. & Lolwana, P. (Eds.). (2012). *Educational Psychology in Social context*: Cape Town: Oxford University Press.
9. Dorfling, P. S. (2016). *A knowledge network model for teachers supporting learners with disabilities in inclusive education system*. *Published Thesis, University of Stellenbosch, Stellenbosch*.
10. Fast, D. K. (2018). *Including Children with Visual Impairment in Early Childhood classroom*. *The Ohio State University, Colombia, USA*. fast.40@osu.edu. DOI: 10.5772/intechopen.80928.
- a. Downloaded on 05 November 2018.
11. Gifkins, J. (2015). *What Is "Active Learning" and Why is it important?* <https://www.e-ir.info/2015/10/08/what-is-active-learning-and-why-is-it-important>
12. Human, L., (2010). *The social inclusion of learners with visual impairment in mainstream Secondary school in Namibia*. (Unpublished Master Dissertation) University of South Africa, Pretoria.
13. Hunt, F. (2013). *Review of National Policies of learning and teaching*. (Paper commissioned for the EFA global monitoring report 2013/4, teaching and learning: Achieving quality for all). UNESCO. Cambodia.
14. Keiding, T. B. (2010). *Observing Participating, Observing-Re-description Based on System Theory [81 paragraph]* *Forum: Qualitative Social Research*, 1,(3), Art, 11, http://ybn.aau.dk/files/4742794/didactic_research_of_classroom_interacting.17 February 2018.
15. Kufakunesu, M. (2015). *The influence of irrational beliefs on the mathematics achievement of secondary school in Zimbabwe*. (Unpublished Ph.D. thesis). UNISA, Pretoria.

16. Kuyini, A.B., Mangope, B. (2011). Student teachers attitudes and concerns about inclusive education in Ghana and Botswana. *International Journal of whole schooling*, 7(1), 20-37.
17. Lake, N. (2010). *Teachers Teaching Strategies in a Sample of South African Inclusive classrooms. A research report submitted in partial fulfillment of the requirements for the degree of Masters of Arts in Psychology by coursework and research report in the Faculty of Humanities, University of Witwatersrand, Johannesburg.*
18. Lekota, K.B., (2014). *Reading comprehension strategies: the use of prior-knowledge as a cognitive strategy by Grade six learners in a primary school in the Lephalale area. Published PhD Thesis, University of Limpopo.*
19. Maponya, H. S. (2014). *An investigating of learners' enrolment in Bela-Bela Farm School: A perspective in education management. (Published Masters Dissertation. UNISA. Pretoria.*
20. Merriam, S.B. (2016). *Qualitative research: A guide to design and implementation: (4th Ed). San Francisco, CA: Jossey-Bass Press.*
21. Miller, S., & Pennycuff, L., (2010). *The Power of Story: Using Storytelling to Improve Literacy Learning. Journal of Cross-Disciplinary perspective in Education*, 1, (1), 36-43.
22. O'Neil, S. & Koekemoer, E. (2016). Two decades of Qualitative research in Psychology, Industrial and Organizational Psychology in Human Resource Management within South Africa: A critical review. *S.A. Journal of Industrial Psychology*/42 (1), a 1350. <http://dx.doi.org/10.4102/sajip.v42i1.1350>. 17 February 2018
- a. Downloaded on 20 July 2017.
23. Pelch, M., & McConnell, D. A. (2016). Challenging instructors to change: a mixed methods investigation on the effects of material development on the pedagogical beliefs of geoscience instructors. *International Journal of STEM Education*, 3(5), 1-18
24. Suc, L., Bukovec, B., Zveglic, M. & Karpljuk, D. (2016). Primary School teacher's Attitude towards Inclusive Education in Slovenia: A Qualitative Exploration, *Journal of Universal Excellence*, 1, 30-46.
25. Tharayil, S., Borrego, M., Prince, M. (2018). Strategies to mitigate student resistance to active learning. *IJ STEM Ed* 5, 7. <https://doi.org/10.1186/s40594-018-0102-y>
26. Thwala, S. (2015). *Challenges encountered by teachers in managing the inclusive classroom in Swaziland. Mediterranean Journal of Social Science*, 6(1), 1/2.
27. Wanjiku, W.R. (2014). *Teaching Strategies used by teachers to enhance learning to learners with multiple disabilities in four selected counties in Kenya, (Published Ph.D. thesis.) Kenyatta University, Kenya.*
28. Woods, M. (2017). *The interview method is a conversation with purpose. Massey: Massey University Press.*
29. Woolfolk, A. (2010). *Educational Psychology. 11th edition. United States of America. Pearson Education International.*
30. Zwane, L. S. (2016). *Teacher training for inclusivity at selected schools in Gege branch of schools in Swaziland. (Unpublished Masters dissertation). UNISA, Pretoria.*
31. Rajiah, Saraswatee, and Salim Aliraja. "Early Identification and Intervention in Early Years: Preschool Teachers in Mauritius." *International Journal of Educational Science and Research (IJESR)* 6.3 (2016).
32. Wang, Nien-Tsan, Y. L. Chen, and Y. C. Hsu. "Assistive design of cursors for low vision users." *Int. J. Commun. Media Stud.(IJCMS)* 6 (2016): 1-6.

33. Khalil, Amal I., and Nusrath Yasmeen. "Does Assistive Technology Help Children having Disabilities in Middle East and North Africa (Mena) Region: a Literature Review." *International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)* 10 (2020): 3209-3224.
34. Habeeb-Allah, Aba M., and Jafar Alasad. "Delirium post cardiac surgery: Review on epidemiology and associated risk factors." *International Journal of Applied and Natural Sciences (IJANS)* 7 (2018): 33-40.

